Quality Control

Work Ord June-18-14 1:5		21226		*121	1226*							Page 1	
Item ID: Revision ID:	D3455-1			Accept	*N900	0040	1100	ገ*	Setup	Start	*N;	S1*	
Item Name:	Spacer						,			Stop	*N:	S2*	
Start Date: Required Date: Reference:	6/18/14 : 6/18/14	Start Qty: 80.00 Req'd Qty: 80.00			Cust Item Customer:								
Approvals:	Process P	lan: MLS	Date: 14-06-18	Tooling: _	D	ate:	_		Run	Start	*N	R1*	
a"≱ .	QC:	. 5-1	Date:	SPC (Y/N):	D	ate:				Stop	*N	R2*	
Sequence ID/ Work Center II	D	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reje Qty		Reject Number	Insp. Stamp	
Draw Nbr	Re	evision Nbr									•		_
D3455	Re	ev A											
*100 *100*	mb.	Hardinge CNC LATHE	SMALL	0.00				80	Ø			DAS 44 4 9-89	801101
Hardinge Hardinge CNC Lath	ne Small	Memo HARDHIN FOLIO RI	IGE COBRA1-TURN AS PEI EV: A DWG REV: A	0.00 R FOLIO FA583 & DW 2-DEBURR AS F				_					
110		QC2- Inspect parts off	machine FAI/FAIB	0.00								DAS	(-S
110 QC Quality Control		Memo		0.00			-	80	_ <u>Ø</u>			9-89 U /	01/08
		,											
120		QC8- Inspect parts - se	cond check	0.00				SO	0	5		DAS 40	
QC · Quality Control		Memo		0.00					⊁	<u></u>		9-89 14/67	108

DQA:			Date:										*DART
QA Closed:			Date:			WORK ORDER NON	·CC	JNFOI	RIVIANCE / UPD	. %.	ork Order up	date only	AEROSPACE
Mork Ordo		· ,	7			DISPOSITION				AGAINST DE	PARTMENT,	PROCESS	
Work Orde Part N	-	<u></u>				Rework Scrap		<u> </u>		Crosstube Small Fab	Pro	Water Jet	Engineering Quality
NCR N	-		· · · · · · · · · · · · · · · · · · ·			Use-as-is Suspected Unapproved			noforming	Finishing Composite	1	e/Packaging Supplier	Other
Root					Desc	ription of work order update		nitial	Action)	Sign &		
Cause		Date	Step	Qty		or non-conformance	Ch	ief Eng	Descript	ion	Date	Verification	QC Inspector
Design Doc/Data Equip/Tooling													
Handling/Pre	\exists												
Material	긕												
Operator	닉												
Offset/Setup	<i>r</i>												
Process	\dashv								,				
Supplier Training	ᅱ				İ				·				
Transport	_				ļ								
Unapproved					ŀ								
	<u>ا . مح</u> نيسر		<u> </u>	<u> </u>			FAI	ULT CAT	EGORY			1	<u> </u>
Landiń		iear				General					***** -		
\ [Bending				Bend	Г	Folio/F	rogram		Outside Dim	ensions	Pressure/Forced
		Centre N	ot Concer	ntric		BOM/Route		Grain			Over/Under	tolerance	Set-up
		Cracks				Broken/Damage/Defect		Hardwa	re		Part Incorrec	ાં 📗	Temperature/Cure
		Crimp/Kii	nk/Ripple	/Wave		Burrs		Inspect	ion Incomplete/Unqu	alified	Part Lost/Mi	ssing	Weld
CAS/		Cuffs				Contamination		Instruct	ions Incomplete/Unc	lear	Part Moved		Wrong Stock Pulled
V.		Crushing				Countersink		Misalig	ned/off center		Positioned V	/rong	_
1		Heat Trea	at			Cut Too Short		Mislabe	eled		Power Loss/	Surge	Other
		Inspectio	n Strip in	Tube		Drawing		Misread	d				
	1	Marks/Cl	natter			Drill Holes		Off-set					
		Turning S	Sequence			Finish		Out of	Calibration				
		Wave/Tw	vist in Tub	oe	[Fit/Function		Out of	Sequence				

121226

Page 2

June-18-14 1:56:00 PM

Item ID:

D3455-1

Accept

80

N900040100

Setup Start

Revision ID:

Start Date:

Item Name: Spacer

6/18/14

80 **Start Qty:** 80.00

Cust Item ID:

Customer:

Reference:

Approvals:

Required Date: 6/18/14

Process Plan: Date:

Tooling:

Date:

Start Run

Stop

QC:____

Date:_____

Req'd Qty: 80.00

SPC (Y/N):

Set Up/

Date:

Stop

NR2

Work Center ID

Operation **Description**

Run Hours Identify as per dwg & Stock Location: STO40 0.00

Tool ID

Tool # Plan Code

Accept Qty

Reject Qty

Reject

Insp. Number Stamp

150

150

Sequence ID/

Packaging

Memo

0.00

DAS

JUL 0 8 2014

Packaging

160

QC21- Final Inspection - Work Order Release

0.00

160

Quality Control

QC

Memo

0.00

DQA:			Date:										TOART
QA Closed:			Date:			WORK ORDER NON	-C(ONFO	RMANCE / UF		ork Order up	odate only	AEROSPACE
QA closed.			Dute.			DISPOSITION					PARTMENT		
Work Orde	er:					DISPOSITION				AGAINST DE	-	/PROCE33	
	•					Rework		1	Skid-tube	Crosstube		Water Jet	Engineering
Part N	۱o.					Scrap			Machining	Small Fab	-4	d. Eng. Coor.	Quality
						Use-as-is		Thern	noforming	Finishing	Rec/Sto	re/Packaging	Other
NCR N	۱o.					Suspected Unapproved]		Large Fab	Composite	_	Supplier	
Root					Desc	ription of work order update		Initial	Acti	on	Sign &		
Cause		Date	Step	Qty		or non-conformance	Ch	nief Eng	Descri	ption	Date	Verification	QC Inspector
Design .													
Doc/Data												•	
Equip/Tooling												•	
Handling/Pre													
Material 🖺 🕦	9 !	iul											
Operator							ĺ						
Offset/Setup													
Process												:	
Supplier		}					l						
Training	_	-											
Transport	<u> </u>		\	İ	-								
Unapproved		<u> </u>	<u> </u>	L			<u> </u>	III T CA	TEGORY		1		
1 4!						General	FA	OLI CA	IEGORT		 .		
Landi	ng (Bending				Bend		Teolio/E	Program		Outside Dim	ensions [Pressure/Forced
	┝	Centre N	ot Concor	ntric	<u> </u>	BOM/Route	\vdash	Grain	rogram	<u> </u>	Over/Under		Set-up
		Cracks	ot concei	ILIIC		Broken/Damage/Defect	\vdash	Hardwa	are	<u> </u> -	Part Incorre		Temperature/Cure
	\vdash	Crimp/Ki	nk/Rinnle	/Wave		Burrs	\vdash	4	ion Incomplete/Un	gualified —	Part Lost/M	<u> </u>	Weld
	-	Cuffs	ing mppic	., wave	<u> </u>	Contamination	\vdash	⊣ `	tions Incomplete/U	· —	Part Moved	F	Wrong Stock Pulled
	-	Crushing				Countersink	<u> </u>	-	gned/off center		Positioned V	∟ Vrong	_
	H	Heat Tre				Cut Too Short		Mislabe	=	<u> </u>	Power Loss/		Other
	\vdash	Inspectio		Tube		Drawing		Misrea			_		
	Т	Marks/Cl	•			Drill Holes		Off-set					
	_	Turning S				Finish	Г	Out of	Calibration				
	Г	Wave/Tw	•			Fit/Function		Out of	Sequence				

June-18-14 1:56:03 PM

Work Order ID: 121226

121226

Parent Item:

D3455-1

D3455-1

Parent Item Name: Spacer

Start Date: 6/18/14

Required Date: 6/18/14

Start Qty: 80.00

Required Qty: 80.00

Comments:

IPP REV. A

05.11.17

NEW ISSUE

EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Primary Item Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status	
MDELRINR1.000		Purchased	No		100	f	3.3830	0.022	2				

Delrin Round Bar 1" color: black

Location	Loc Oty	Loc Code		
MAT039	3.383		A 47.4	DAS
m128667	3.383		1, 167	DAS 44 14/07/08

**

DQA:			Date:											"DAPT
						WORK ORDER NON	-CC	ONFO	RMANCE / UP					AEROSPACE
QA Closed:			Date:							W	ork Order up	date only		· · · · · ·
Work Orde	or.					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS		
WOIK OIG	-				_	Rework	1		Skid-tube	Crosstube	1	Water Jet		Engineering
Part N	No.					Scrap			Machining	Small Fab	− {	d. Eng. Coor.	:	Quality
NCR I	No.					Use-as-is Suspected Unapproved		Thern	noforming Large Fab	Finishing Composite	Rec/Stoi	e/Packaging Supplier		Other
Root					Desc	ription of work order update	Ī	nitial	Actio	on	Sign &	r 		
Cause	Ì	Date	Step	Qty		or non-conformance	Ch	ief Eng	Descrip	otion	Date	Verificatio	n	QC Inspector
Design														
Doc/Data									·					
Equip/Tooling						•								
Handling/Pre			PAG								,			
Material	·	. *	49.0				ĺ							
Operator														
Offset/Setup	Ш				Ī	*	1							
Process														
Supplier	Ш													
Training						•					}			
Transport					ļ,									
Unapproved			<u> </u>				<u> </u>		<u> </u>			·		L.
							FA	ULT CA	TEGORY		 			
Landi	$\overline{}$	I			_	General		1 ,-	_	_	7		$\overline{}$	1
	Ш	Bending			_	Bend	<u> </u>	1	Program	<u> </u>	Outside Dim		\vdash	Pressure/Forced
	Ш	Centre N	ot Concer	ntric	<u> </u>	BOM/Route		Grain		_	Over/Under		_	Set-up
	-	Cracks			<u> </u>	Broken/Damage/Defect	┡	Hardwa			Part Incorred			Temperature/Cure
	-	Crimp/Ki	nk/Ripple	e/Wave		Burrs	<u> </u>	1 '	tion Incomplete/Unc	· —	Part Lost/Mi	ssing	_	Weld
	\vdash	Cuffs			<u> </u>	Contamination		4	tions Incomplete/Ur	nclear	Part Moved	14		Wrong Stock Pulled
		Crushing			<u> </u>	Countersink	<u> </u>	-1	gned/off center	<u> </u>	Positioned V	_		louber
	Щ	Heat Tre			\vdash	Cut Too Short	_	Mislabe		<u></u>	Power Loss/	Surge	L	Other
	\vdash	Inspectio		Tube	 	Drawing	\vdash	Misrea						
		Marks/Cl			<u> </u>	Drill Holes	\vdash	Off-set						
	<u> </u>	Turning S	-		<u> </u>	Finish	\vdash	4	Calibration		· · · · · · · · · · · · · · · · · · ·			
		Wave/Tw	vist in Tub	oe e		Fit/Function	1	Out of	Sequence					

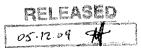
DART AEROSPACE LTD	Work Order:	12/226
Description: Spacer	Part Number:	D3455-1
Inspection Dwg: D3455 Rev: A		Page 1 of 1

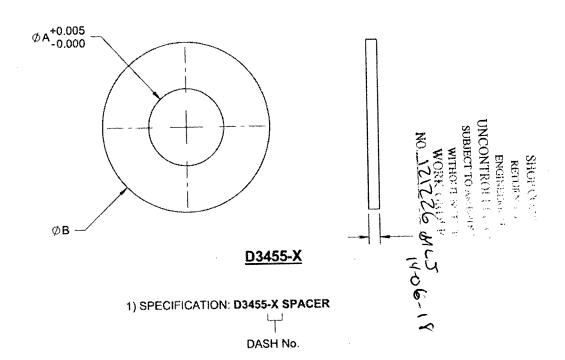
	FIRS	T ARTICLE IN	ISPECTI	ON CHE	CKLIST		`
		x First Artic	cle	Prote	otype 		
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comm	
Ø0.453	+0.005/-0.000	.454	7		Vern	FK-04	
Ø1.00	+0.010/-0.001		7		\ <u>\</u>	ι,	
0.065	+/-0.010	1.004 *	/		1.	h.,	
		.** .**					
		1.1	**				
						 	
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	240						
	DAS 44			PAS 40		<u> </u>	NI/A
Measured by:	9-89	Audited by	: <u> </u>	-89	Prototype		N/A
Date:	14/07/08	Date	: 14/07	68		Date:	N/A
Davi Data	Change					Revised by	Approv
Rev Date Δ 06.07.1						KJ/JLM 🚓	臣

				Revised by,	Approved
	Rev	Date	Change	KJ/JLM	
Ì	A	06.07.11	New Issue	KJ/JLIVI S	



DESIGN		DRAWN BY	DART AEROS HAWKESBURY, ON	
CHECK		APPROVED	DRAWING NO.	REV. A
DATE	105 (09.02	TITLE SPACER	SCALE 2:1
 Α		5.09.02	NEW ISSUE	





WHERE 'X' IS THE SIZE PER THE FOLLOWING TABLE:

DASH No.	A (in)	B (in)	C (in)
-1	0.453	1.00	0.065
-3	0.386	1.00	0.050

NOTES:

- 1) MATERIAL: DELRIN ROUND BAR (REF. DART SPEC. M-DELRIN-R)
- 2) FINISH: NONE
 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
 4) ALL DIMENSIONS ARE IN INCHES
 5) BREAK ALL UNMARKED SHARP EDGES 0.005 TO 0.010